

NATIONAL OCEAN POLLUTION POLICY BOARD

REVIEW OF FY 1990
AGENCY REQUESTS FOR APPROPRIATIONS

To Support Marine Pollution Research,
Development and Monitoring Programs

February 1989

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PREFACE

The National Ocean Pollution Planning Act (P.L. 95-273; NOPPA), as amended by the Omnibus Budget Reconciliation Act of 1986 (P.L. 99-272; enacted April 7, 1986), called for the National Oceanic and Atmospheric Administration (NOAA) to establish and support an interagency National Ocean Pollution Policy Board consisting of representatives from all Federal agencies that conduct or support marine pollution research, development, or monitoring programs. The duties of the Board include annual review of requests for appropriations to support marine pollution research. Each agency in the Federal Plan for Ocean Pollution Research, Development, and Monitoring is required under Section 3A of NOPPA to prepare and submit each year to the Policy Board a summary of its requests for appropriations to support ocean pollution research, development, and monitoring programs. The requests for appropriations are reviewed by the Policy Board which subsequently submits a report to OMB and the Congress concerning these budget requests. Under NOPPA, OMB is to review the requests for appropriations as an integrated, coherent, multiagency request and is to take into account the review of the Board. This report complies with the legislative requirement for the Board to conduct a review of FY 1990 marine pollution research, development, and monitoring budgets and to submit a report on the budget review to OMB and the Congress.

1. INTRODUCTION

The National Ocean Pollution Planning Act of 1978 (NOPPA) (P.L. 95-273, as amended) requires that the interagency National Ocean Pollution Policy Board prepare and submit to the Office of Management and Budget (OMB), and the Congress, a report on budget requests for the National Marine Pollution Program. The National Marine Pollution Program is the composite of the programs in all Federal departments and agencies related to marine pollution research, development, or monitoring activities. The primary purpose of NOPPA was to establish effective coordination of marine pollution research, development, and monitoring activities throughout the Federal Government and to assure that Federal programs address national needs and problems. Marine pollution-related programs are funded by eleven separate Federal departments and independent agencies which support or conduct about 700 projects in 45 individual programs. The budget review process for the National Marine Pollution Program is intended to supplement the established procedure of submitting comprehensive budget requests through OMB and to provide a different perspective to Congress concerning the Administration's budget proposal. Under NOPPA, OMB is to "review the request for appropriations as an integrated, coherent, and multiagency request, taking into account the review by the Board of those requests...."

NOPPA requires that the annual budget review analysis include requests for appropriations to carry out activities under the Federal Plan for Ocean Pollution Research, Development, and Monitoring. In many cases, the marine pollution-related projects within the agencies and departments are integral components of larger programs which may not have marine pollution studies as their primary focus. For the purpose of this budget analysis, each

agency program has been characterized as "directly related to marine pollution" or "indirectly related to marine pollution" using the guidelines presented in Table 1. This report focuses primarily on the budgets of "direct" programs from FY 1986 through FY 1990. FY 1986, FY 1987, FY 1988, and FY 1989 budgets are based upon estimates of actual expenditures. The 1990 budget presented herein reflects former President Reagan's 1990 budget submitted to Congress on January 9, 1989. On February 9, 1989, President Bush announced his budget plan which included specific new initiatives and a residual freeze category. For the most part, the programs described in this report fall into the freeze category. Their final funding level will be determined through negotiations with Congress. For the purpose of starting those negotiations on the freeze programs, the Reagan budget proposals should be treated as if they were Bush proposals.

This report contains four sections:

1. Introduction
2. Overview of Funding Patterns
3. Major Changes Proposed in the FY 1990 Agency Requests for Appropriations
4. Consistency of the Appropriations Requests with National Marine Pollution Priorities.

The section on "Overview of Funding Patterns" considers relative levels of funding among agencies and time trends in total funding. The third section examines the major proposed changes in funding for the different programs directly related to marine pollution. The nature of, and reasons for, these changes are presented in this section. The final section discusses the overall budget request as compared to national priorities for marine pollution research, development, and monitoring.

Table 1. Guidelines to Distinguish Between Direct and Indirect Marine Pollution Programs

Components of the National Ocean Pollution Research, Development and Monitoring Program may be directly or indirectly related to marine pollution. The following guidelines are provided to assist in distinguishing between these two types of programs. The guidelines are to be applied at the program level. They are based on the mandates and objectives of the program rather than on the specific research or monitoring projects in the program.

- o Direct Programs. Programs should be considered as directly related to marine pollution if either or both of the following criteria are met:
 - (1) The legislative mandate or regulatory requirement for the program is substantially based on concern over the environmental effects of a polluting activity. Polluting activities may include, but are not limited to, the following:
 - marine waste disposal
 - marine mining
 - marine energy development
 - marine transportation
 - fishing activities
 - accidental discharges
 - causes of nonpoint source pollution in coastal areas (e.g., farming, silviculture, urban/suburban development) or
 - alteration of coastal, Great Lakes, or other marine habitats.
 - (2) The primary objective of the program is to provide information or learn more about marine pollution phenomena in one of the following areas:
 - effects of pollutants on specific marine organisms;
 - significance of marine pollution to human health;
 - input rates, sources, transport, fates, and transformations of pollutants;
 - ambient concentrations of pollutants in water, sediment, or tissues of marine organisms;
 - overall status of marine ecosystems and organisms with respect to pollution effects.
- o Indirect Programs. Programs should be considered as indirectly related to marine pollution if they fall within the National Ocean Pollution Research, Development, and Monitoring Program and do not meet either of the criteria for "direct" relationship. In general the objectives of these programs will be:
 - to develop biological, chemical, or physical characterizations of marine systems in the absence of concern over pollution effects;
 - to develop instrumentation, analytical techniques, or other technologies that would have applications independent of those related to marine pollution;
 - to provide general logistical support; or
 - to promote the effective management of a living marine resource.

2. OVERVIEW OF FUNDING PATTERNS

The Presidential request for appropriations in FY 1990 to support research, development, and monitoring programs directly related to marine pollution totals \$115.4 million. In addition, approximately \$11.7 million is requested to support research, development, and monitoring efforts that were reported as indirectly related to marine pollution.* This budget review focuses primarily on programs directly related to marine pollution. This section of the budget review presents information on relative funding levels requested by the agencies and time trends in funding for the total Federal program.

Principal Agencies Requesting Appropriations

The following agencies and departments are submitting requests for appropriations to support research, development, and monitoring programs directly related to marine pollution in FY 1990:

	<u>FY 1990 Presidential Request</u>
Environmental Protection Agency (EPA)	\$ 42,785 K
National Oceanic & Atmospheric Administration (NOAA)	31,266
Minerals Management Service (MMS)	18,500
Army Corps of Engineers (COE)	9,307
Fish & Wildlife Service (FWS)	3,997
Department of Agriculture (USDA)	3,570
Department of Health & Human Services (HHS)	3,438
Department of Transportation (USCG)	1,600
Navy (USN)	<u>900</u>
Total Requests for Direct Programs	\$ 115,363 K

* See Tables 2 and 3 as well as Table 1 for the definition of "direct" and "indirect" programs.

TABLE 2. DIRECT PROGRAMS

03/04/89

FUNDING SUMMARY FOR THE NATIONAL OCEAN POLLUTION RESEARCH, DEVELOPMENT AND MONITORING PROGRAM
PROGRAMS DIRECTLY RELATED TO MARINE POLLUTION
FISCAL YEARS 1986-1990

	FY86 Estimate -----	FY87 Estimate -----	FY88 Estimate -----	FY89 Estimate -----	FY90 Request -----
Council on Environmental Quality					
Office of Environmental Quality					
Environmental Trends	11	9	9	0	0
-- Total -- Office of Environmental Quality	11	9	9	0	0
U.S. Department of Agriculture					
U.S.D.A. Marine Pollution Studies					
Nonpoint Source Contaminants Program	2,386	2,208	2,235	2,443	2,628
Habitat Modifications Program	937	900	901	917	911
Point Source Contaminants Program	31	31	31	31	31
-- Total -- U.S.D.A. Marine Pollution Studies	3,354	3,139	3,167	3,391	3,570
U.S. Department of Commerce					
National Oceanic and Atmospheric Administration					
Coastal and Estuarine Assessment Program	5,450	5,441	5,701	5,700	4,661
Strategic Assessment Program	2,800	2,833	3,341	3,000	3,000
Hazardous Materials Response Program	2,010	2,084	2,289	2,289	2,289
National Marine Pollution Coordination Program	1,167	1,293	1,293	1,293	1,293
Deep Seabed Mining Environmental Research Program	408	469	396	534	534
Environmental Research Laboratories Ocean Pollution Studies	958	958	772	772	772
Environmental Research Laboratories Great Lakes Pollution Studies	2,678	2,934	2,339	2,339	2,339
Sea Grant Ocean Pollution Program	3,506	3,134	3,210	3,210	0
National Fishery Ecology Program	6,288	5,972	3,348	3,348	3,348
Microconstituents Program	90	0	0	0	0
Estuarine Programs Office	1,444	1,518	2,260	2,160	560
Marine Pollution Data Support	58	70	70	70	70
Coastal Ocean Program					12,400
-- Total -- National Oceanic and Atmospheric Administration	26,857	26,706	25,019	24,715	31,266
U.S. Department of Defense					
U.S. Army Corps of Engineers					
Environmental Quality Research and Development Program	2,100	1,700	1,250	975	900
Navigation Project and Environmental Operations and Maintenance	5,964	7,296	7,250	9,015	8,407
-- Total -- U.S. Army Corps of Engineers	8,064	8,996	8,500	9,990	9,307
U.S. Navy					
Environmental Protection Technology Program	1,900	1,575	1,235	720	900
-- Total -- U.S. Navy	1,900	1,575	1,235	720	900
U.S. Department of Energy					

TABLE 2. DIRECT PROGRAMS (CONTINUED)

DOE Marine Pollution Studies					
Subseabed Disposal Program	7,500	1,000	0	0	0
-- Total -- DOE Marine Pollution Studies	7,500	1,000	0	0	0
U.S. Department of Health and Human Services					
Food and Drug Administration					
Seafood Safety and Contamination Program	2,220	2,840	3,080	3,140	3,140
-- Total -- Food and Drug Administration	2,220	2,840	3,080	3,140	3,140
National Institute of Environmental Health Sciences					
Extramural Research Program	452	350	278	289	298
-- Total -- National Institute of Environmental Health Sciences	452	350	278	289	298
U.S. Department of the Interior					
Minerals Management Service					
Headquarters and Regional Studies Programs	20,912	19,285	20,106	18,000	18,500
-- Total -- Minerals Management Service	20,912	19,285	20,106	18,000	18,500
U.S. Fish and Wildlife Service					
Research and Development	2,875	3,227	2,857	2,857	2,857
National Wetlands Inventory	2,690	2,138	1,878	1,878	1,140
-- Total -- U.S. Fish and Wildlife Service	5,565	5,365	4,735	4,735	3,997
U.S. Department of Transportation					
U.S. Coast Guard					
Marine Environmental Response Program	1,235	975	1,744	990	1,600
-- Total -- U.S. Coast Guard	1,235	975	1,744	990	1,600
U.S. Environmental Protection Agency					
EPA Marine Pollution Studies					
Marine Disposal Research	7,560	6,925	6,000	5,400	6,485
Energy Related Research	265	305	190	120	120
Water Quality Research	6,180	7,170	8,330	7,985	8,465
Great Lakes Research	5,770	5,500	10,180	11,315	9,645
Chesapeake Bay Program	600	925	1,425	825	1,200
National Estuary Program	5,700	7,260	5,050	8,590	13,180
Reducing Uncertainty in Risk Assessment for Ecological Systems				450	3,000
Ecological Trends					690
-- Total -- EPA Marine Pollution Studies	26,075	28,085	31,175	34,685	42,785

TOTAL FEDERAL SPENDING FOR DIRECT PROGRAMS	104,145	98,325	99,048	100,655	115,363

TABLE 3. INDIRECT PROGRAMS

03/04/89

FUNDING SUMMARY FOR THE NATIONAL OCEAN POLLUTION RESEARCH, DEVELOPMENT AND MONITORING PROGRAM
PROGRAMS INDIRECTLY RELATED TO MARINE POLLUTION
FISCAL YEARS 1986-1990

	FY86 Estimate -----	FY87 Estimate -----	FY88 Estimate -----	FY89 Estimate -----	FY90 Request -----
U.S. Department of Commerce					
National Institute of Standards and Technology					
Center for Analytical Chemistry	0	0	0	0	0
-- Total -- National Institute of Standards and Technology	0	0	0	0	0
National Oceanic and Atmospheric Administration					
Measurement Systems Development Program	0	222	0	0	0
National Marine Sanctuary Program	402	357	452	452	452
Ship Support	9,874	2,750	1,900	850	850
-- Total -- National Oceanic and Atmospheric Administration	10,276	3,329	2,352	1,302	1,302
U.S. Department of Energy					
DOE Marine Pollution Studies					
Regional Marine Program	5,259	5,118	5,221	5,721	6,955
Physiological Ecology Program	891	777	546	406	0
-- Total -- DOE Marine Pollution Studies	6,150	5,895	5,767	6,127	6,955
U.S. Department of the Interior					
U.S. Geological Survey					
Water Resources Division Program	2,200	2,000	2,000	2,000	2,000
Geologic Division Program	4,314	583	783	428	428
-- Total -- U.S. Geological Survey	6,514	2,583	2,783	2,428	2,428
U.S. Environmental Protection Agency					
EPA Marine Pollution Studies					
Exploratory Research	540	540	540	540	540
-- Total -- EPA Marine Pollution Studies	540	540	540	540	540
U.S. National Aeronautics and Space Administration					
Office of Space Science and Applications					
Ocean Productivity Program	483	480	480	510	490
-- Total -- Office of Space Science and Applications	483	480	480	510	490
U.S. National Science Foundation					
Division of Ocean Science					
Division of Ocean Science	376	690	151	50	0
-- Total -- Division of Ocean Science	376	690	151	50	0
TOTAL FEDERAL SPENDING FOR INDIRECT PROGRAMS	24,339	13,517	12,073	10,957	11,715

The overall Federal program is dominated by requests for appropriations to the EPA (\$42.8 million) and NOAA (\$31.3 million). Taken together, these two agencies account for nearly 65% of requests for appropriations to support direct programs in FY 1990. The EPA would support a very diverse program, both in-house and extramurally, to address a broad spectrum of marine pollution and water quality issues primarily in estuaries, near-shore zones, and the Great Lakes. Under the budget request, EPA would also support two new programs: the Ecological Trends (ET) Program and Reducing Uncertainties in Risk Assessment (RURA) for Ecological Systems Programs. Ecological Trends has been proposed as a new effort for FY 1990, while RURA commenced in FY 1989. NOAA funds would be used to support a diverse effort consisting of twelve different programs including strategic assessments using existing data, studies to improve our ability to respond to accidental spills of oil and hazardous materials, research on fisheries ecology, and regional studies in the Great Lakes. NOAA's Coastal Ocean Program is a major new initiative for FY 1990 which would focus on chemical and biological surveys, coastal and estuarine habitats, and nutrients in coastal oceans. The MMS program, which would be funded at \$18.5 million in FY 1990, focuses exclusively on studies conducted under contract to address environmental concerns associated with development of offshore oil and gas resources. The U.S. Army Corps of Engineers is requesting \$9.3 million in FY 1990, primarily for site-specific studies to support dredging and dredged material disposal projects. The remaining agencies (FWS, HHS, USDA, DOT, and USN) are each requesting less than \$5 million for direct programs and would represent, in combination, almost 12% of the total request for appropriations to support research, development, and monitoring programs directly related to marine pollution in FY 1990.

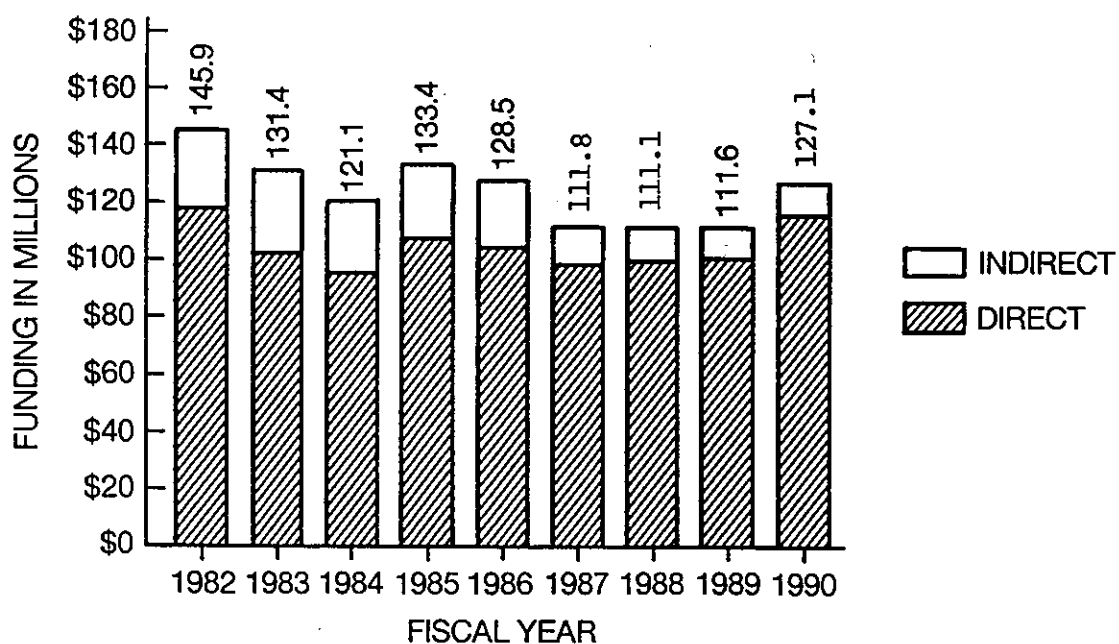
Trends in Total Funding

Funding levels for the total (direct plus indirect) national ocean pollution research, development, and monitoring program from FY 1982 through FY 1990 are presented in Figure 1. From FY 1982 to FY 1984, total Federal expenditures for ocean pollution research, development, and monitoring programs were reduced by approximately \$25 million. Between FY 1984 and FY 1985, Federal expenditures increased by about \$12 million, and then were reduced by more than \$20 million over the next two years. From FY 1987 through FY 1989, funding remained relatively constant at about \$111 million. The FY 1990 Presidential budget request would support an increase of \$15 million in expenditures for marine pollution studies. The proportion of funding devoted to direct programs has ranged from about 75% to 90% of the total between FY 1982 and FY 1989, although the percentage has risen to the higher level in more recent years.

Trends in Agency Funding

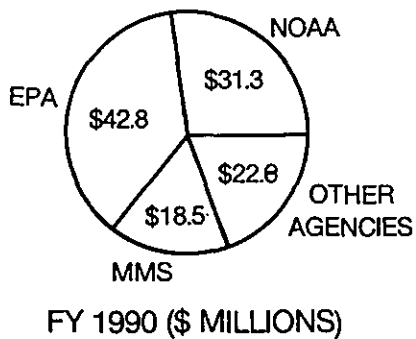
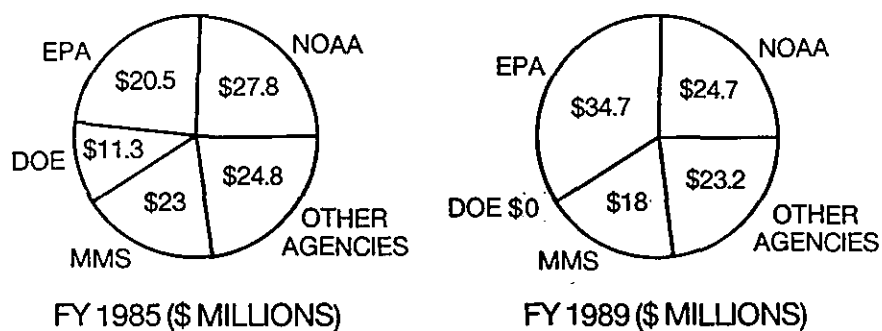
Figure 2 illustrates a significant trend in apportionment among agencies of the total funding for direct programs from FY 1985 through FY 1990. During FY 1985, NOAA received about 26% of the total funding for direct programs; EPA and MMS each accounted for about 20% of the total funding for direct programs; DOE received about 11%. In FY 1989, EPA accounted for approximately 34% of the total funding for direct programs. NOAA and MMS accounted for 25% and 18%, respectively, while DOE phased out funding for direct programs. Under the Presidential budget proposal for funding in FY 1990, EPA and NOAA would account for 37% and 27%, respectively, of the total funding for direct programs. Of the remaining funds, MMS would receive approximately 16%, and 20% would be distributed among the remaining

FIGURE 1
TRENDS IN FUNDING FOR THE NATIONAL
MARINE POLLUTION PROGRAM*



*FY 82-FY 89 ARE FUNDING ESTIMATES; FY 90 FUNDING IS BASED ON THE PRESIDENTIAL BUDGET.

FIGURE 2
DISTRIBUTION OF FUNDING AMONG AGENCIES
FOR DIRECT PROGRAMS IN FY 1985, FY 1989,
AND FY 1990



FY 1985 AND FY 1989 BUDGETS ARE ESTIMATES OF ACTUAL
EXPENDITURES; FY 1990 PROJECTIONS ARE
BASED ON THE PRESIDENTIAL BUDGET.

agencies. Thus, since 1985, the EPA portion of funding has grown from 19% to 37%; DOE funding for direct programs has been phased out; MMS funding has been decreased from 21% to 16% of the Federal effort; and NOAA's portion of the funding has remained relatively stable at 25% to 27% of the total. These realignments primarily result from increased funding requested for EPA's programs in Reducing Uncertainty in Risk Assessment for Ecological Systems, the Great Lakes, Water Quality, the National Estuary Program, phasing out of DOE's Subseabed Disposal Program, and gradual decreases in MMS OCS oil and gas studies. The following section of this report discusses in more detail the major increases and decreases in program funding levels that would result from the FY 1990 requests for appropriations.

3. MAJOR CHANGES PROPOSED IN THE FY 1990 REQUESTS FOR APPROPRIATIONS

This section discusses major changes in agency funding levels proposed in the Presidential request for appropriations in FY 1990. Only changes in programs directly related to marine pollution are included as it would be inappropriate to judge levels of funding requested for indirect programs using marine pollution-related criteria because these programs typically serve other purposes as well as contributing to the understanding of marine pollution phenomena.

A. Environmental Protection Agency

The President's budget proposes appropriations for EPA in FY 1990 in the amount of \$42.8 million to support programs directly related to marine pollution. This represents a net increase of \$8.1 million over the estimated expenditures for FY 1989. Increased funding would support programs in Marine Waste Disposal (+\$1.1 million), Water Quality (+\$480K) Chesapeake Bay (+\$375 K), and National Estuaries (+\$4.6 million). Two new, complementary programs would be added which include components addressing marine pollution problems: Reducing Uncertainties in Risk Assessment for Ecological Systems (+\$2.5 million), and Ecological Trends (+\$690 K). Funding for the Energy Related Program would continue at a level comparable to the FY 1989 figure, and the Great Lakes Program would decrease by \$1.7 million from the FY 1989 amount.

The increase in funding for the Marine Waste Disposal Program would be directed to EPA Regional Offices to enable them to take a more active role in marine monitoring related to environmental impact studies.

The proposed increases for Water Quality would be used to: compare methods used to derive sediment quality criteria; develop test methods for monitoring sediment quality based on chronic effects; develop and verify sediment suspension-resuspension models; and to augment the exposure, effects, and risk control components of the biotechnology risk assessment program.

The Chesapeake Bay Program has proposed a small increase over FY 1989. These additional funds would support a heightened monitoring effort for toxic substances and living resources.

The National Estuary Program has proposed the addition of four new estuaries to the program, thus increasing the total from twelve in FY 1989 sixteen in FY 1990 and necessitating the proposed increase in funding. The Water Quality Act of 1987 authorized EPA's administrator to convene management conferences to develop comprehensive plans for estuaries of national significance. The conferees are charged with balancing the conflicting uses in an estuary while restoring or maintaining its natural character. The management conference of each estuary program will identify pollution problems particular to that estuary and then devise a management plan to address these problems.

The Reducing Uncertainties in Risk Assessment for Ecological Systems effort was initiated in FY 1989 at the request of Congress. The focus for the first year will be to thoroughly review existing ecological monitoring data bases to indicate the validity and completeness of current data, to identify areas of greatest uncertainty in risk assessments, and to evaluate the appropriateness of ecological endpoints and indicators of ecosystem health, including coastal ecosystems. A design for ecological monitoring systems will then be developed and implemented in FY 1990 by matching available and/or augmented data collection efforts with the measures required for effective systems monitoring.

The Ecological Trends Program is proposed as a new effort for FY 1990. Quantitative evaluations would be conducted on available monitoring data for pollutant exposure in air, water, and soil media to identify critical gaps. Ecological conditions in coastal waters would be observed to expand environmental research and monitoring programs for measuring a wide spectrum of contaminants. Research would be conducted in ecosystem classification, monitoring network design and optimization, indicator methods for ecological

condition, and quality assurance and data management techniques for multi-operator, multi-objective environmental monitoring networks. This research would complement the Reducing Uncertainties in Risk Assessment Program for Ecological Systems.

B. National Oceanic and Atmospheric Administration

The National Oceanic and Atmospheric Administration (NOAA) is requesting \$31.3 million to support studies directly related to marine pollution research, development, and monitoring in FY 1990. This represents a net increase of \$6.6 million over estimates of actual spending for FY 1989.

The increase in the NOAA budget request is linked to funding requested for the Coastal Ocean Program (COP), a new program proposed to start in FY 1990. The goal of NOAA's COP is prediction of environmental change to provide decision-makers with better, scientifically credible options for solving coastal problems. The COP would include the following types of activities: observation and diagnosis; data management, synthesis, and information dissemination; and research and model development. The budget proposed for the COP in FY 1990 is \$12.4 million which would be used to support research and monitoring on status and trends of marine ecosystems, coastal and estuarine habitats, nutrients in coastal areas, and satellite-based remote sensing of coastal habitat types.

The President's budget also includes funding for the Coastal and Estuarine Assessment Program (CEAP) in the amount of \$4.7 million. The CEAP was funded at \$5.7 million in FY 1989. Funding for this program was not included in recent Presidential budget requests. Activities under the CEAP include the National Status and Trends (NS&T) Program and the Consequences of Contaminants Program (CCP). The NS&T Program was established to monitor long-term temporal and spatial trends of contaminant concentrations in sediments and benthic fish and bivalves at 150 U.S. coastal sites. The objectives of the CCP are to apply data collected through the NS&T Program to further the understanding of the fate and long-term effects of various contaminants on valued living

marine resources (e.g., the effects of waste disposal on reproductive potential of living resources); and to evaluate new indicators of biological effects for the NS&T Program.

No funding was requested for the Sea Grant College Program in FY 1990. The Sea Grant College Program was established to create a network of academic institutions with strong marine education and research programs. The major goal of the ocean pollution research program of Sea Grant has been to develop an improved understanding of the fates and effects of toxic organic pollutants and of the behavior of human pathogens in the marine environment. The program was funded at the \$3.2 million level in FY 1989, but no funding is requested for the program for FY 1990. The Administration has proposed termination of the Sea Grant Program because the goals of the program have been met, and that further activities at Sea Grant institutions should be supported by state, local, or private funding.

C. U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Civil Works) conducts two research, development, and monitoring programs that are considered to be directly related to marine pollution. These are the Environmental Quality Research and Development Program which consists of selected U.S. Army Corps of Engineers (USACE) projects concerning the environmental implications of activities conducted by the USACE or over which the USACE has permitting authority (e.g., dredging and dredged material disposal, alterations of waterways and coastal areas), and the Navigation Project Environmental Operations and Maintenance Program which consists of project-specific studies at the Division or District level (e.g., site surveys and monitoring). As compared to FY 1988, the USACE is requesting a reduced level of appropriations for the former program and increased funding for the latter (see Table 2).

The Environmental Quality Research and Development Program would be reduced from \$1.3 million in FY 1988 to \$900 thousand in FY 1990 under the Presidential request for appropriations. This results from the successful completion of major research components on environmental effects of rubble structures, beach and foredune ecology, disposal alternatives for dredged material (including the joint Corps/EPA Field Verification Project - a demonstration project), effects of dredging contaminated sediments, and wetlands definition and valuation. Under this program, the USACE will continue the Long-term Effects of Dredging Operations (LEDO) Project to address the most significant questions that remain concerning the long-term effects of dredging and dredged material disposal in the marine environment.

The USACE is requesting increased appropriations for the Navigation Project Environmental Operations and Maintenance Program (\$7.3 million in

FY 1988 to \$8.4 million in FY 1990). This results primarily from design and construction of some 41 coastal deep draft navigation projects authorized under Public Law 99-662 (The Water Resources Development Act of 1986). Requests for increased funding have been included to cover such project-specific activities as studies required to designate new or expanded ocean dredged material disposal sites, sediment testing and project-specific environmental characterizations, site monitoring and management.

D. Fish and Wildlife Service

The Fish and Wildlife Service (FWS) reports two research, development, and monitoring programs as directly related to marine pollution. The first of these, entitled "Research and Development," is intended to collect and interpret information on fish and wildlife species, populations, and habitats that would assist research managers. This program has three components: Fisheries and Wetland Research, Wildlife and Contaminant Research, and Technical Development. The FWS Research and Development Program has been level-funded since FY 1988.

The National Wetlands Inventory (NWI) is reported as the second program of the FWS. The purposes of the NWI include, among others: conduct an inventory of U.S. wetland habitats, establish and maintain standardized procedures for classification of wetland habitats, correlate wetland habitat values to the classification system, and conduct analyses of time trends in U.S. wetland habitat acreages. The FWS is requesting \$1.1 million in funding for the NWI in FY 1990. This represents a decrease of \$0.7 million compared to estimates of expenditures in FY 1988. The FWS is requesting reduced funding because priority coastal areas have been mapped. In fact, approximately 95% of coastal areas in the lower 48 states (including the Great Lakes) have been mapped. NWI resources are being shifted to priority areas in the inland United States.

4. CONSISTENCY WITH NATIONAL PRIORITIES

The purpose of this section is to compare requests for appropriations to support marine pollution studies in FY 1990 with national marine pollution priorities as presented in the Federal Plan for Ocean Pollution Research, Development, and Monitoring. The most recent Federal Plan has been completed, approved by the National Ocean Pollution Policy Board, and submitted to the President and Congress by NOAA in December 1988.

The FY 1990 Presidential proposal for appropriations to support marine pollution research programs totals \$115.4 million (direct programs only). This would represent an increase of \$14.7 million over estimated expenditures for FY 1989. The budget request would result in a return to the approximate level of funding reported for FY 1982 (ignoring inflation), but would support a very different mix of programs.

Between FY 1982 and FY 1988, funding for programs directly related to marine pollution changed from \$117.1 million to \$99.3 million, representing a reduction of about 15% in the FY 1982 funding level. These savings resulted primarily from the reduction or elimination of programs that had fulfilled their objectives, or for which priorities had been reduced. Many of these changes have been consistent with priorities published in the appropriate edition of the Federal Plan. For example, the MMS reduced the funding of environmental studies concerning the effects of OCS oil and gas development by some \$13 million as lease areas have been adequately characterized and sufficient knowledge acquired concerning the effects of oil in the marine environment. The Department of Energy Strategic Petroleum Reserve Brine Disposal Program (funded at \$3.3 million in FY 1982) was phased out after sufficient information was acquired regarding the environmental effects of discharging super-saturated

brine solutions into the Gulf of Mexico. The Subseabed Disposal Program, also supported by DOE, was reduced from its FY 1982 funding level of \$5.9 million and eliminated in FY 1988 as a result of changing policies regarding the viability of alternative options for disposal of high-level nuclear waste. Similarly, NOAA programs have been reduced by about \$15 million as a result of eliminating regional programs, increasing emphasis on use of existing data, and consolidating field programs to focus on national priorities.

Compared to FY 1989 funding estimates, the increase in the budget request for FY 1990 largely results from the following changes:

- EPA's National Estuary Program, an ongoing program for which an increase of \$4.6 million over FY 1989 levels is requested;
- EPA's Reducing Uncertainties in Risk Assessment for Ecological Systems Program, a new effort which began in FY 1989 and for which \$3.0 million is requested in FY 1990; and
- NOAA's Coastal Ocean Program, a new initiative for which \$12.4 million is requested.

The increase in the National Estuary Program would allow the expansion of the program to sixteen estuaries. This is part of a shift in focus from offshore and continental shelf studies to coastal and estuarine areas, and is consistent with a recommendation made in the last Federal Plan (FY 1985-1989). The most recent Federal Plan (FY 1989-1993) points out the value of improved measurement and monitoring of the status of marine ecosystems -- especially in coastal and estuarine areas. EPA's Ecological Trends Program is designed to meet this need, and would be enhanced greatly by portions of NOAA's proposed Coastal Ocean Program. Effective coordination of these programs will be needed to ensure that their efforts are complementary rather than duplicative. Such coordination has already been initiated by program managers in EPA and NOAA.

NOAA's COP is a major new initiative for understanding coastal ecosystems and how human activities affect the resources that the Nation values. The COP represents an important step in the evolution of the overall Federal effort. New marine pollution priorities have emerged since the trimming of completed and lower priority programs in the early 1980's. These new priorities center around evidence of widespread pollution effects in coastal areas, impacts of pollutants that enter marine systems from nonpoint sources and atmospheric routes, and a commitment to documenting environmental conditions in coastal and Great Lakes systems. With recent media exposure highlighting catastrophic events such as dolphin mortalities and aesthetic problems associated with illegal disposal of hospital wastes, pressure is increasing for the Federal Government to implement more effective measures to regulate polluting activities and manage marine resources. Funding requested in FY 1990, especially for the National Estuary Program, Ecological Trends Program, and Coastal Ocean Program, will provide the information needed by policymakers for evaluating management options.